



COP29
Baku
Azerbaijan



United Nations
Climate Change



**BRITISH SOCIETY
OF SOIL SCIENCE**



INSTITUTO
ESCOLHAS



Animal Welfare.
Worldwide.



Ecological Christian Organisation



cirad
AGRICULTURAL RESEARCH
FOR DEVELOPMENT



Invest in Soil Health:

Fostering the Future of Climate Change Mitigation and Adaptation

Thursday 14 November | 3pm | COP29 Side Event Room 4



Paul Luu



Dr. Dipayan Dey



**Dr Carolina
Nascimento**



Juliana Luiz



Isaac Kabongo



Salome Owuonda

WELCOME

➤ Prof. Jack Hannam

The British Society of Soil Science



➤ Paul Luu

4 per 1000 Initiative



➤ Dr. Dipayan Dey

South Asian Forum for Environment [SAFE]



➤ Dr. Carolina Nascimento

Four Paws



➤ Juliana Luiz

Escolhas Institute



➤ Isaac Kabongo

Ecological Christian Organization



➤ Salome Owuonda

Africa Centre for Sustainable and Inclusive Development



Soil Health Overview

1. Why does Soil Health matter?
2. How does Soil Health matter in the context of the Rio conventions?
3. What does good Soil Health look like and how do we achieve that?



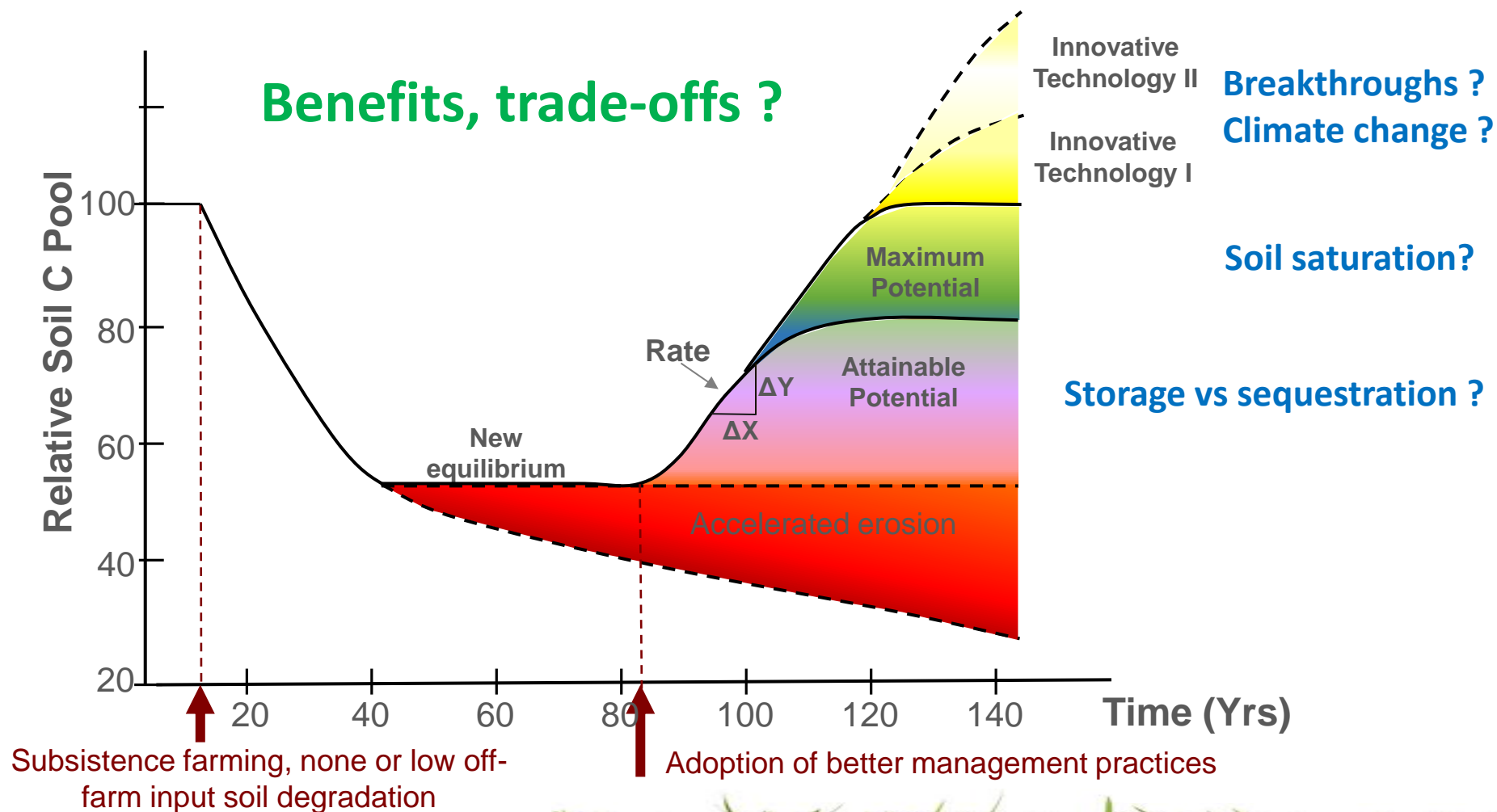
SDGs to which soil contributes directly



SDGs to which soil indirectly contributes



Estimating the Potential of Soil Carbon and Associated Benefits such as biodiversity



How do the 3 Rio sister-conventions treat soil and soil health?



CoP 15 "Desertification" - *Abidjan* - May 2022

- Strong appeal on the importance of healthy and productive land and soils to strengthen synergies between conventions, particularly for concrete implementation. But little media coverage...



Cop 16 "Biodiversity" - *Calí* - October 2024

- Agriculture is directly (conv. Ag.) or indirectly (deforest.) responsible.
- Almost no mention of soils in the Kunming-Montreal framework agreement for biodiversity (obj. 11: soil health & obj. 10: agroecology) and no real follow up mechanism.



Cop 28 "Climate Change" - *Dubai* - December 2023



- Move away from fossil fuels, and highlight on agriculture, AE and FS.
- References to agriculture in "adaptation section" of the GST decision.
- No significant progress on Article 6 on international carbon trading
- Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action by 159 Heads of State
- FAO roadmap: "Achieving SDG 2 without exceeding the 1.5°C threshold: a global roadmap or How the transformation of agri-food systems through accelerated climate action will contribute to ensuring food security & nutrition, today and tomorrow".



Healthy Soils are

carbon rich soils through carbon sequestration which allow climate change mitigation	soils rich in organic matter full of life and biodiversity which can support high biodiversity ecosystems above soil	soils rich in organic matter which can absorb high quantities of water to be used by plants and which are less sensitive to erosion (wind and water)	fertile soils allowing agricultural production on the long run with stabilized yields
--	---	---	--

So, an healthy soil is the minimum basis to reach the objectives of the following UN Conventions and Organization



Thus, the indispensable starting point...

Regeneration and Just Transition

1. What regenerative approaches could be taken to enhance the sustainability of our soils globally across different land uses?
2. How do we facilitate just transition?



Brazil in context:



TOP 5

in the world in
cropland area



39%

of temporary
cropland area in
South+Central
America
(11% of the world)



26%

of Brazil's
emissions are
from the
agricultural sector



88%

of all grain
production in Brazil
is soybean and
mayze



TOP 1

Soybean producer
150 million ton in
46 million hectares



TOP 3

Maize producer
115 million ton in
21 million hectares

10-year soybean scenario: 2011-2021	Area
Expected growth rate	20%
Effective growth rate	65%

27%

is the
expected area
growth rate
for 2021-2031

Are regenerative approaches in place enough?

2010



Brazilian target for No-Till System
By 2020, an increase of 8 million hectares

Total of increase in 2020:
14,59 million hectares

14% of total area w/ temporary crops
(91million ha)

1% of Agricultural Credit Plan to ABC
(totalling 50 billion USD)

2020



New Brazilian target for No-Till System
By 2030, an increase of 12,5 million hectares
in the grain sector

2030

Brazilian Agricultural Census	2006	2017	%↑
Farms w/temporary crops (Units)	1.881.325	1.653.742	-12%
Farms w/temporary crops (Hectares)	48.913.424	91.409.423	87%
Farms w/no-tillage (Units)	506.667	553.382	9%
Farms w/no-tillage (Hectares)	17.871.773	33.052.969	85%

Who is doing this transition?
Who is being left behind?

Finance, Incentives and Innovation

1. Are there innovative examples/approaches for financing/incentivising sustainable land and soil management?
2. How can the private sector best be engaged?



SUSTAINING OUR SOILS



Ruminants and grasslands have coevolved for millennia.
How do sustainable grazing practices contribute to soil health?

Taking a closer look at local examples:

Crop-livestock forestry systems in Brazilian Amazon and Cerrado

Pastoralism in the Sahelian rangeland in Senegal

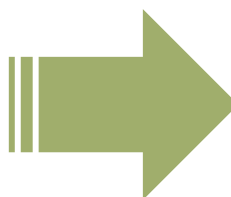


ILF AND ICLF SYSTEMS IN BRAZIL

ABC-Plan

The ABC Plan is a public policy that details actions to mitigate and adapt to the climate crisis in the agricultural sector.

ABC Plan (acronym for Low Carbon Agriculture Plan, in Portuguese), which encouraged the adoption of integrated systems by ranchers and farmers.



Integrated crop-livestock systems

Main findings

Trees contributed to thermal comfort of animals

Increase carbon sequestration

Carbon sequestration may compensate enteric methane emissions

Increased soil organic matter and health

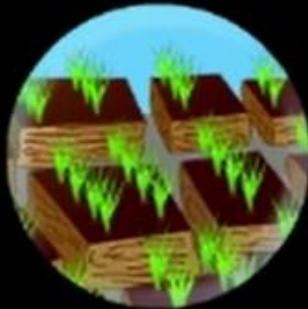
In East Africa, population growth places increasing pressure on soils and ecosystems.

Deforestation



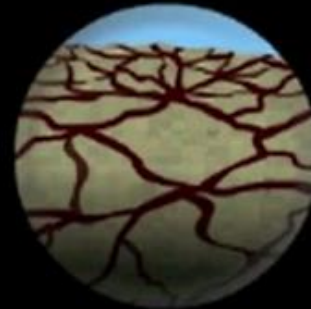
+

Smaller Farms



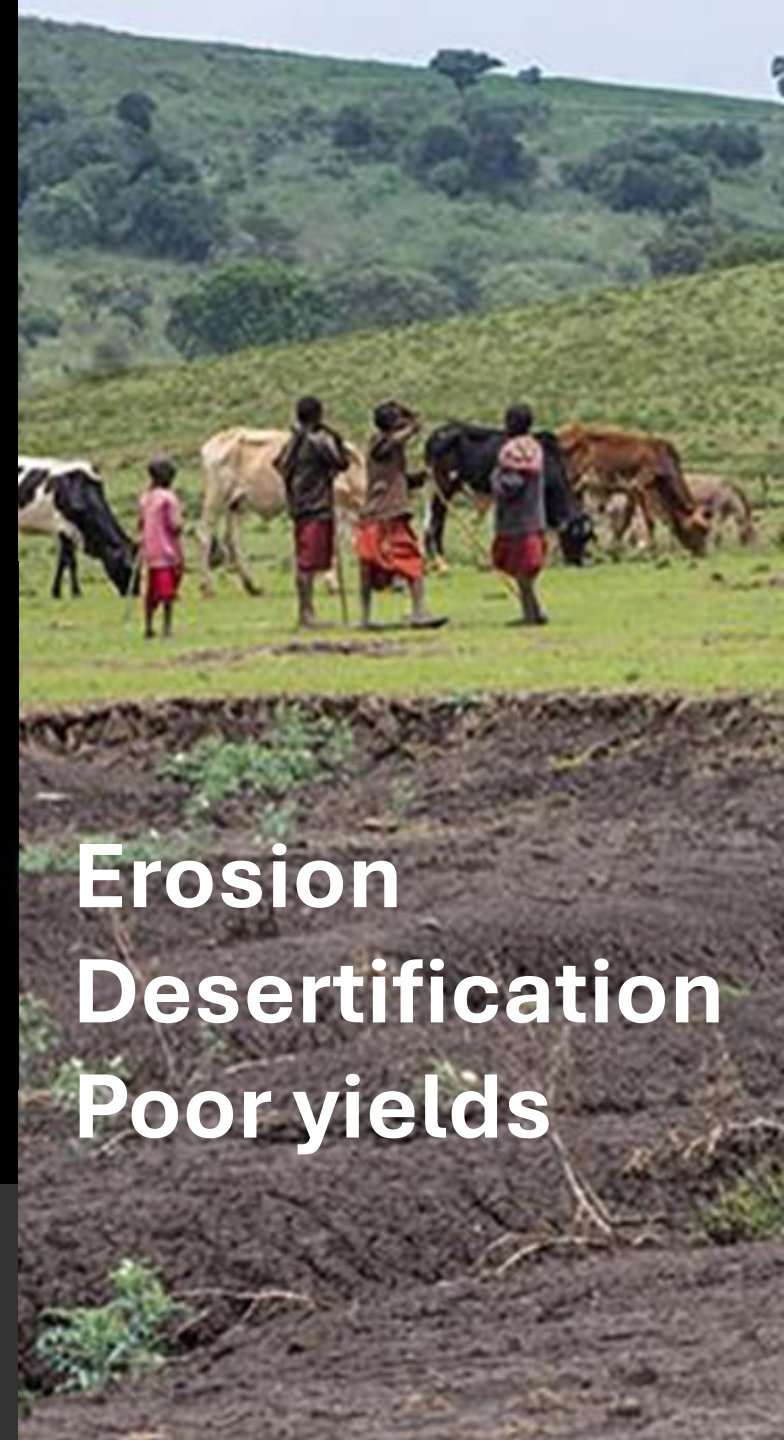
+

Drought

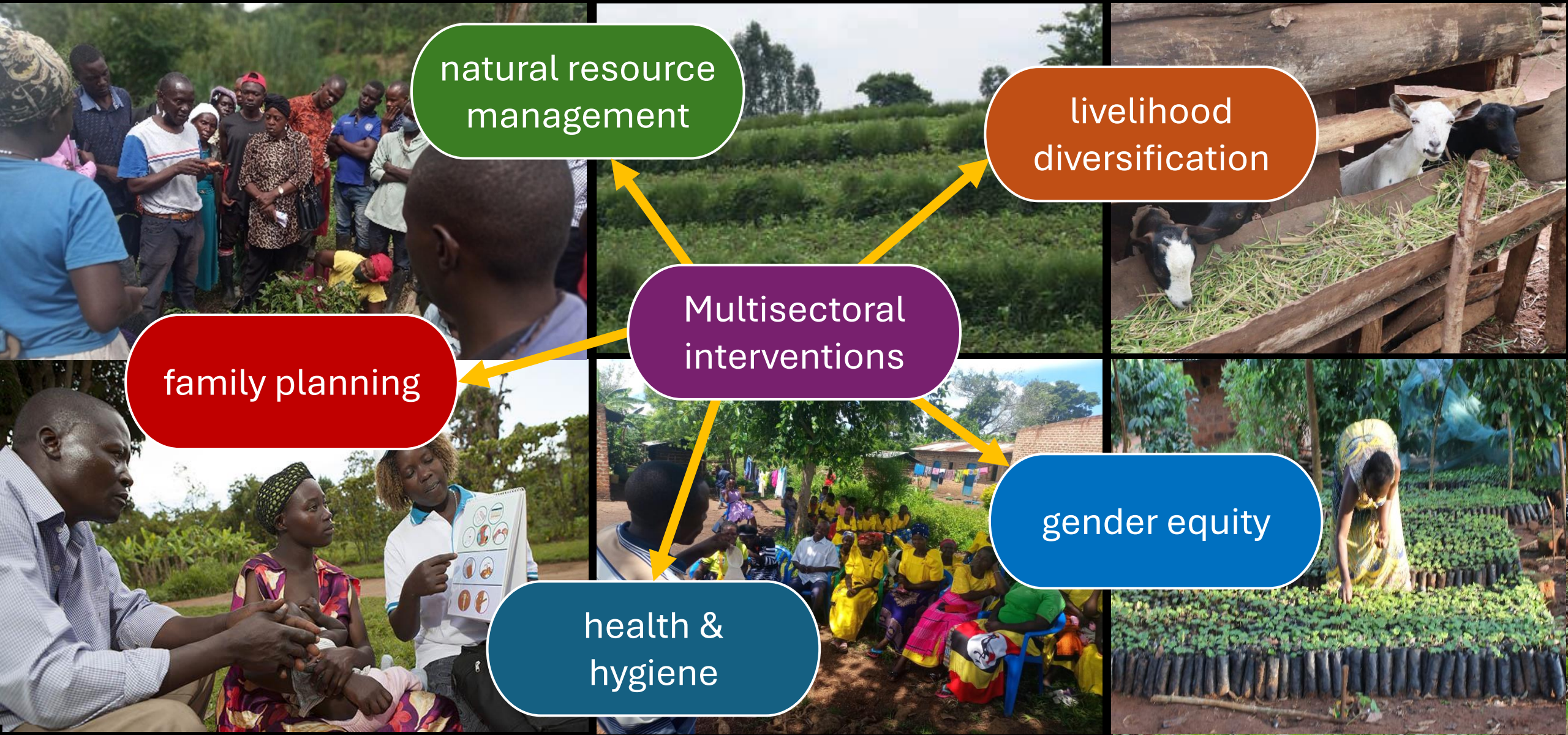


=

Erosion
Desertification
Poor yields



The Population, Health & Environment (PHE) approach



Collaboration

1. What are the barriers to these approaches and how can we foster collaboration on a global scale?



QUESTIONS FOR THE PANEL FROM THE FLOOR



Fireside chat

1. What would your top message be to negotiators and government representatives here at Baku?



COP29
Baku
Azerbaijan



United Nations
Climate Change



BRITISH SOCIETY
OF SOIL SCIENCE



INSTITUTO
ESCOLHAS



Animal Welfare.
Worldwide.



Ecological Christian Organisation



cirad
AGRICULTURAL RESEARCH
FOR DEVELOPMENT



Invest in Soil Health:

Fostering the Future of Climate Change Mitigation and Adaptation

Thank you for listening
Scan to learn more

